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MINISTRY OF TRANSPORT
AND CIVIL AVIATION

COMMITTEE ON ROAD SAFETY

Report on the Minimum Age for Motor Cyclists

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MINISTRY OF TRANSPORT AND CIVIL AVIATION

COMMITTEE ON ROAD SAFETY

REPORT ON THE MINIMUM AGE FOR MOTOR CYCLISTS

Terms of reference

1. We were asked in December, 1955 to reconsider the existing minimum age limit for riding a motor cycle, and now submit this report dealing with—

(*a*) the minimum ages at which persons should be licensed to ride motor cycles of different types;

(*b*) the grouping of motor cycles for driving test and driving licence purposes;

(*c*) other related matters.

Acknowledgements

2. The Sub-Committee which we set up to examine in detail the matters covered by our terms of reference had the benefit of a considerable amount of information supplied by the Managing Director of an insurance company and of information supplied by the General Post Office, and also of the advice of the Chief Driving Examiner of the Ministry of Transport and Civil Aviation. We gratefully acknowledge the valuable help and counsel which the Sub-Committee received.

Summary of recommendations

3. The following is a summary of our recommendations :—

Minimum age

(1) No justification is seen on present evidence for raising generally the minimum age of 16 years for riding motor cycles. (Paragraph 34.)

(2) Surveys should be undertaken to obtain further data on accident rates for motor cyclists of different ages. (Paragraph 38.)

(3) In order to encourage young persons to start riding on the smaller types of machines, the minimum age limit should be reduced to 15 years for mopeds (as defined in this report) and increased to 17 years for motor cycles (other than three-wheelers but including side car combinations) of over 250 c.c. (Reservations against the proposed reduction in the age limit below 16 years for mopeds were made by Mr. T. C. Foley representing the Pedestrians' Association for Road Safety and Councillor J. Scott representing the Association of County Councils in Scotland, Convention of Royal Burghs, and Counties of Cities Association.) (Paragraphs 40 and 43.)

(4) In relation to the preceding recommendation, steps should be taken to ensure that mopeds retain their existing characteristics, and in particular that they are designed with a maximum speed of about 25 m.p.h. (Paragraph 41).

Grouping of motor cycles for driving test purposes

(5) The view of the majority of the Committee is that driving tests should be retained for mopeds. (Paragraph 47.)

(6) A person passing the driving test on a moped should be granted a full licence restricted to that type of vehicle only, but a person passing the test on other types of motor cycles (except three wheelers) should be granted a full licence covering mopeds. A reservation was made by

Mr. Hanhart representing the Standing Joint Committee of the R.A.C., A.A. and R.S.A.C. (Paragraph 47.)

(7) A person passing the test on a motor cycle should not be granted a licence to drive a three-wheeler and, conversely, a person passing the test on a three-wheeler classified as a motor cycle should not be granted a full licence extending to other types of motor cycles or to mopeds. (Paragraph 50.)

(8) Separate driving tests should not be introduced for other types of motor cycles. (Paragraph 48.) (As regards three-wheelers, *see also* (11) below.)

Purchase of machines

(9) The Ministry of Transport and Civil Aviation should consult with organisations representing manufacturers and dealers to try to ensure that inexperienced motor cyclists are dissuaded from riding newly-purchased machines in unsuitable conditions. (Paragraph 53.)

Three-wheeled vehicles classified as " motor cycles "

(10) The minimum age should remain at 16 years. (Paragraph 57.)

(11) A person passing the test on a three-wheeler fitted with means of reversing should receive a full licence enabling the holder to drive a non-reversible three-wheeler. A person passing the test on a non-reversible three-wheeler should receive a full licence restricted to a vehicle of that category. (Paragraphs 59 and 60.)

Road Traffic Act, 1956

4. We noted that section 10 of the Road Traffic Act, 1956, which received the Royal Assent on 2nd August, 1956, is in the following terms :—

> " 10.—(1) The Minister may by regulations provide that section nine of the Act of 1930 (which imposes minimum ages for the driving of motor vehicles on roads) shall have effect in relation to motor cycles, or, if it is so prescribed by the regulations, in relation to motor cycles of any class or description so prescribed, as if for the minimum age for driving there were substituted such age (not being less than sixteen years) as may be so prescribed :
>
> Provided that a person shall not be prohibited by virtue of regulations under this section from driving motor cycles of any class or description if at any time before the coming into force of the regulations he has held a licence comprising that class or description of motor cycles (other than a provisional licence) or if at the time of the coming into force of the regulations he holds a provisional licence, and for the purposes of this proviso " licence " means a licence to drive granted under Part I of the Act of 1930.
>
> (2) In subsection (5) of the said section nine (which provides for treating a person as disqualified for holding or obtaining a licence if prohibited by reason of age from driving a motor vehicle of any class) after the word " class " there shall be inserted the words " or description ".
>
> (3) The power to make regulations under this section shall be exercisable by statutory instrument subject to annulment in pursuance of a resolution of either House of Parliament."

5. The Minister of Transport and Civil Aviation is thus now empowered to make regulations to increase the present minimum age limit of 16 years for the granting of a licence to ride a motor cycle, which is imposed by section 9 of the Road Traffic Act, 1930. This may be done either generally or in relation to motor cycles of any particular class or description. On the other hand, there is no power to make regulations to reduce the present minimum age.

6. The definition of the term " motor cycle " for the purposes of Road Traffic Acts is unchanged by the Road Traffic Act, 1956 and is given in section 2 (1) (*f*) of the Road Traffic Act, 1930, as follows :—

> "(*f*) Motor cycles ; that is to say, mechanically propelled vehicles (not being vehicles classified under this section as invalid carriages) with less than four wheels and the weight of which unladen does not exceed eight hundredweight ".

We have accordingly framed our recommendations in relation to motor cycles as so defined.

Recent trends in the development of motor cycles

7. It is necessary to refer briefly to developments which have taken place since the war in the design of motor cycles, and to describe the characteristics of the main types which are referred to in this report. It should be emphasised that developments in design are taking place continually, and further changes are inevitable. Since the war, apart from the development of new types of " three-wheelers ", there have been two major developments. These and the main characteristics of different classes of motor cycles can be summarised as follows :—

(*a*) *Moped*

The first main development in the design of motor cycles was the appearance in the British market of small engines which could be attached to a pedal bicycle with the object of saving the rider's effort and enabling him to go rather faster. Some bicycles to which these engines were fitted suffered mechanical failures, and earned these attachments a bad reputation. The practice of purchasing these engines separately and fitting them to an ordinary pedal bicycle has declined, but their initial popularity had shown the public demand for a light machine which would be simple to ride and cheap to buy. Manufacturers, therefore, soon developed designs which amount in effect to a strengthened pedal bicycle modified to incorporate a small engine. The popularity of this development in continental countries led to the addition to the Convention on Road Traffic drawn up at Geneva in 1949 of Annex I which reads as follows :—

> " Cycles fitted with an auxiliary internal combustion engine having a maximum cyclinder capacity of 50 c.c. (3·05 cu. in.) shall not be considered as motor vehicles, provided that they retain all the normal characteristics of cycles with respect to their structure."

The countries which accepted this Annex agreed later to substitute " performance " for " structure ". The United Kingdom, however, had made clear its intention to exercise the right granted in the Convention to exclude Annex I from its application of the Convention because United Kingdom legislation had always treated all mechanically powered cycles as motor vehicles, and no evidence was available that there was justification for doing otherwise. Various continental countries have adopted special legislation about " mopeds," and the term is widely recognised to mean " a machine equipped with pedals which can be used for propulsion, and with an engine which has a cylinder capacity not exceeding 50 c.c." Such machines normally have a maximum speed not exceeding 25 m.p.h.

Although at present the fitting of pedals is an essential characteristic of these machines, this may not be the case in the future. In our view the fitting of pedals would not necessarily be a fundamental requirement in relation to these machines and should not therefore be treated as an essential feature in any legislation which might be adopted to give effect to the recommendations made in this report. Accordingly the term is used in this report to mean a motor vehicle having broadly the characteristics of a cycle and fitted with an engine with a cylinder capacity not exceeding 50 c.c.

(b) Motor scooter

The other main development was the introduction of the motor scooter. As first introduced it was easily recognised as a scooter by its small wheels, enclosed mechanism, and open frame. The majority of these machines have a two-stroke engine with a cylinder capacity up to 125 c.c., but engine sizes of various models range up to 200 c.c. Such scooters normally have a three-speed gearbox and a maximum speed up to about 50 m.p.h. The design of scooters has however continued to develop, and there has been a trend towards the use of larger wheels. Future developments seem likely to produce machines which it may be impossible to distinguish from the orthodox motor cycle.

(c) Orthodox motor cycle

The lighter classes of this type weigh up to 300 lbs., and have engines working on either the two or four-stroke principle and a cylinder capacity up to 250 c.c. They have three or four-speed gearboxes and maximum speeds up to 65 m.p.h. The heavier classes usually have engines working on the four-stroke principle with a cylinder capacity up to 650 c.c., and a four-speed gearbox.

(d) Three-wheeled motor cycle

The legal definition mentioned in paragraph 6 includes three-wheeled vehicles with an unladen weight up to 8 cwt. There has been considerable development in recent years in the design of three-wheelers and they are coming into use in increasing numbers. There is no typical design as they range from very light machines, which carry two people in tandem and have an engine no larger than that in a motor scooter, up to the equivalent of a small car. Some types are fitted with means for reversing, and the existence of this is presently used as the criterion as to how they are treated for driving test purposes. The term "three-wheeler" as used in this report excludes motor cycles which have a sidecar attached.

8. We concluded that since continuing development may well blur certain potential lines of demarcation, the only satisfactory ways by which machines could reasonably be divided into types for different legislative treatment are firstly on the basis of the cylinder capacity of the engine and secondly by treating three-wheelers as a separate class. The criterion of engine capacity is subject to the limitation that it takes no account of whether the engine operates on the two-stroke or the four-stroke principle. Moreover greater horse power has in the past progressively been obtained from successive new designs using any given engine capacity, and this trend is likely to continue. One example of its effect is to be found in the fact that, whereas before the war a number of manufacturers made motor cycles with an engine capacity of just under 1,000 c.c. today only one maker does so. As it is not possible to classify motor cycles on the basis of performance we concluded that there is no practicable alternative for the purpose of certain recommendations to using the criterion of engine capacity, which has the advantage, in relation to questions of enforcement, of being required to be shown on the Vehicle Excise licence carried on the machine. The position of three-wheelers is discussed in the concluding section of this report.

Numbers of motor cycles licensed

9. The number of vehicles classified as "motor cycles" is steadily increasing on the roads of this country, and this increase has been accelerated in recent years. The table below shows the numbers of motor cycles in the various capacity groups currently licensed in the September quarter of 1938 and in each post-war year.

TABLE 1

Number of motor cycles with current licences in the September quarter

Year	*Solo motor cycles*					*Motor cycles with sidecar or trailer*	*Three-wheelers under 8 cwt. unladen weight*
	Not over 60 c.c.	*61–150 c.c.*	*151–250 c.c.*	*Over 250 c.c.*	*Total*		
1938 ..	32,867		131,620	172,964	337,451	106,200	18,636
1946 ..	77,349		114,735	183,744	375,828	73,521	10,453
1947 ..	87,332		118,779	222,907	429,018	84,549	10,905
1948 ..	97,195		113,493	245,121	455,809	87,000	11,095
1949 ..	129,890		126,568	281,286	537,744	96,727	12,595
1950 ..	29,297	157,677	130,191	305,885	623,050	106,370	15,070
1951 ..	79,473	178,755	129,156	314,871	702,255	120,316	17,234
1952 ..	120,472	205,914	138,765	326,448	791,599	130,229	18,276
1953 ..	153,919	224,856	150,774	338,935	868,484	140,671	18,840
1954 ..	191,732	254,170	166,351	344,075	956,328	151,506	21,004
1955 ..	227,173	287,340	191,227	354,419	1,060,159	160,827	24,560
1956 ..	246,443	321,513	210,703	352,788	1,131,447	158,446	26,261

The figures in this table are from the Ministry of Transport and Civil Aviation's records which show only the engine capacity (in cubic centimetres) and do not distinguish between the different types of motor cycles described above. The column headed "Not over 60 c.c." virtually comprises mopeds only. The column headed "61–150 c.c." includes most types of motor scooters. During the last four years the numbers of the former have doubled and those of the latter have increased by half.

Liability of motor cyclists to accidents

10. It should be noted that, although three-wheeled vehicles are legally classified as "motor cycles", the national statistics of road casualties treat motor cycles fitted with side cars as motor cycles and other three-wheelers as motor cars. The latter are excluded from the following Tables in this report.

11. The Table below shows the numbers of riders and passengers on motor cycles (including sidecars) who have died or been injured as a result of road accidents in Great Britain during recent years :—

TABLE 2

Casualties to motor cyclists and their passengers

Year	*Fatal*	*Serious*	*Slight*	*Total*
1938 (*a*)	1,145	31,626		32,771
1946	772	6,980	15,021	22,773
1947	783	7,132	15,859	23,774
1948	585	5,146	11,000	16,731
1949	818	8,707	16,922	26,447
1950	1,129	11,842	24,419	37,390
1951	1,175	13,482	28,023	42,680
1952	1,142	13,314	28,188	42,644
1953	1,237	15,579	32,622	49,438
1954	1,148	15,847	35,536	52,531
1955	1,362	17,995	44,245	63,602
1956	1,250	18,193	44,440	63,883

(*a*) Excluding sidecar passengers in 1938.

12. The national statistics of road casualties do not distinguish between riders of different classes of motor cycles, but from 1954 onwards separate figures are available of casualties to riders on machines up to 60 c.c. The accident rate for these machines is considered in paragraph 14 below.

13. Table 3 below shows the changing relationship between the yearly casualty totals given in Table 2 and the numbers of motor cycles shown to have been currently licensed in Table 1.

TABLE 3

Casualties to motor cyclists and their passengers for every 10,000 motor cycles licensed

Year	*Deaths per 10,000 motor cycles*	*Casualties per 10,000 motor cycles*
1938	26	739
1946	17	507
1947	15	463
1948	11	308
1949	13	417
1950	15	513
1951	14	519
1952	12	463
1953	12	490
1954	10	474
1955	11	521
1956	10	495

Although the numbers of both deaths and casualties have increased less rapidly than has the number of licensed motor cycles, accidents to their riders and passengers still present a serious problem.

14. The evidence in Table 4 below suggests that riders of motor cycles with engines up to 60 c.c. have a much lower accident rate than riders of other motor cycles.

TABLE 4

Casualties compared with motor cycles licensed during 1956

Type of Motor Cycle	*Number licensed (Thousands)*	*Casualties to riders*		*Casualties per 10,000 motor cycles*	
		Deaths	*Injuries*	*Deaths*	*Injuries*
Motor cycles up to 60 c.c. ..	246	46	3,050	2	124
Motor cycles over 60 c.c. ..	1,043	1,028	47,191	10	452

Note.—More detailed figures are given in Table 9.

The figures in Table 4 do not take any account of differences between the average yearly mileages covered by each of the two types, but the casualty rates per 10,000 machines are so much lower for the smaller type that it seems reasonable to suppose that a comparison between casualty rates which took account of mileages would also favour the smaller machines. This result might well be expected from the comparatively low speeds of which these machines are capable.

Age of motor cyclist casualties and casualty rates

15. We have kept constantly in mind the problem of the risks run by motor cyclists as a whole, and especially in so far as it might be considered to have a bearing on the question whether young persons of, for example, 16, 17 or 18 years of age should be permitted to ride motor cycles. We considered, however, that our task was primarily to try to find out whether these young motor cyclists were subject to greater risk than older riders, either generally or on particular classes of machines. The following Table 5 gives the ages of riders of motor cycles up to and over 60 c.c. who were killed or injured in 1956.

TABLE 5

Ages of motor cyclists who became casualties in 1956

	Riders of motor cycles up to 60 c.c.				*Riders of motor cycles over 60 c.c.*			
	Killed	*Seriously injured*	*Slightly injured*	*Total*	*Killed*	*Seriously injured*	*Slightly injured*	*Total*
Under 15 years of age	—	1	—	1	—	3	—	3
15 years and under 16	—	2	—	2	—	6	5	11
16 ,, ,, ,, 17	—	11	42	53	21	400	900	1,321
17 ,, ,, ,, 18	1	12	65	78	41	749	1,574	2,364
18 ,, ,, ,, 19	—	12	34	46	60	805	1,858	2,723
19 ,, ,, ,, 20	—	11	38	49	42	834	1,743	2,619
20 ,, ,, ,, 25	4	44	195	243	276	4,220	9,488	13,984
25 ,, ,, ,, 30	3	70	247	320	192	2,329	5,745	8,266
30 ,, ,, ,, 40	7	172	592	771	171	2,409	5,772	8,352
40 ,, ,, ,, 50	8	179	515	702	116	1,472	3,301	4,889
50 ,, ,, ,, 60	10	153	388	551	80	805	1,621	2,506
60 ,, ,, ,, 70	9	69	130	208	20	210	391	621
70 ,, ,, ,, 80	4	19	19	42	6	34	41	81
80 ,, ,, over ..	—	—	4	4	1	3	1	5
Unknown age	—	12	14	26	2	165	307	474
Total	46	767	2,283	3,096	1,028	14,444	32,747	48,219

16. Table 6 below gives a comparison covering a period of five years between the numbers of motor cyclists in different age groups who became casualties and the numbers of people in these age groups in the total population.

TABLE 6

Casualties per head of population—yearly average, 1952–1956

Age	*Riders of motor cycles (including mopeds)*	
	Deaths per 100,000 persons	*Casualties per 100,000 persons*
16	2·4	148
17	4·6	268
18	6·2	286
19	6·9	309
20–24	9·5	385
25–29	5·6	234
30–39	2·5	115
40–49	1·7	67
50–59	1·2	39
60–69	0·8	16
70–79	0·3	5
80 and over ..	0·1	1
All ages	2·8	114

TABLE 7

Age of rider and size of machine in sample of 100,000 insured motor cyclists

Percentage of all machines in nine age groups of owners		*Cubic capacities*	*Percentage of five capacity groups for each of nine age groups*									*Percentage of all ages*
			16–17	*18–19*	*20–21*	*22–23*	*24–25*	*26–30*	*31–40*	*41–50*	*Over 50*	
16–17	7·2	Up to 100 c.c.	. 8·3	4·0	3·0	3·0	4·6	7·7	15·0	20·2	28·4	10·7
18–19	7·8	101–200 c.c. ..	53·3	44·3	38·8	33·7	34·4	35·8	40·1	40·4	44·6	39·8
20–21	10·5											
22–23	10·7	201–250 c.c. ..	17·7	17·3	16·2	14·9	11·5	9·9	8·5	7·8	8·1	11·7
24–25	9·2	251–350 c.c. ..	13·6	22·2	21·1	22·6	19·7	13·8	8·3	6·8	4·0	14·0
26–30	16·0											
31–40	17·1	Over 350 c.c. ..	7·1	12·2	20·9	25·8	29·8	32·8	28·1	24·8	14·9	23·8
41–50	13·6											
Over 50	7·9											
All ages	100·0	All machines ..	100·0	100·0	100·0	100·0	100·0	100·0	100·0	100·0	100·0	All machines 100·0

17. Table 6 shows that the death and the casualty rates per head of population were greatest for the 20–24 age group, and that the rates for this age group were higher than for the individual age groups 16–19. The high rate for the 20–24 age group may be largely due to the relatively greater number of motor cycles used by people of age 20–24, who may well also cover greater yearly mileages on their machines.

18. We, therefore, sought to ascertain the casualty rate, in terms of "rider-miles", for riders of those age groups which might be considered relevant to any proposal to alter the existing minimum legal age for riding a motor cycle, and also, as far as possible, the effect on the casualty rate of experience. However, the data which we were able to obtain are not complete, and cannot be regarded as conclusive. Further data could probably best be obtained by a special survey of the age distribution and riding experience of motor cyclists, aimed at ascertaining the relative yearly mileages and accident rates for the different age groups, but it was not practicable to put the surveys in hand whilst petrol rationing was in force. Nevertheless a good deal of additional information bearing on the problem was obtained from an insurance company, and we have felt justified in making recommendations based upon it.

19. This information related mainly to a sample comprising 100,000 motor cyclists, insured during 1954, analysed into groups according to cylinder capacity of their machines and the ages of their owners. This sample covered all types of motor cycles, excluding three wheelers, but owing to the form of records kept it was not possible to break down the 16–17 and 18–19 age groups into individual years. The distribution of the sample among sizes of machines and age groups, is given in Table 7.

20. It was found possible to relate the figures in Table 7 to the national statistics of fatal and serious casualties to motor cyclists during the same period, which were specially analysed for this purpose. Because the size groupings are different, it was necessary to combine the first three cylinder capacity groups in the Table, and it was not possible to give separate figures for motor cycles over 500 c.c. As the insurance sample included comparatively few machines under 60 c.c. the accident figures for all machines under 60 c.c. were excluded. Accidents involving machines of unknown size or ridden by people of unknown age were also omitted.

21. The result of combining the sample with the national accident figures is shown in the Table 8 below.

TABLE 8

Relative casualty rates for motor cyclists

(fatal and serious injury to riders, during 1954)

Age Group	*Engine Size Group*			*Total*
	(61–250 c.c.)	*(251–350 c.c.)*	*Over 350 c.c.*	
16–17	0·63	1·55	2·21	0·86
18–19	0·69	1·82	3·00	1·22
20–21	0·57	2·08	2·22	1·23
22–23	0·54	1·57	2·07	1·17
24–25	0·61	1·78	1·90	1·22
26–30	0·56	1·93	1·59	1·09
31–40	0·51	2·25	1·43	0·91
41–50	0·45	1·96	0·96	0·68
Over 50	0·57	2·05	1·11	0·71
All ages	0·55	1·87	1·66	1·00

Note.—In the above Table, the accident figures are calculated as the number of fatal and serious casualties to riders, divided by the estimated number insured, and multiplied by a constant to give an overall average of unity.

22. The Table shows riders in the 18–25 age groups as having the highest accident rates per head, but those for the 16–17 age group on all machines taken together are below average and lower than those for the 18–19 age group. At all ages the smallest engine-size group has an accident rate markedly below that for the other two ; this may be attributable, at least in part, to these small machines covering a lower average yearly mileage than do larger machines. It is not known how far the comparatively low figure shown for the 16–17 year old age group as a whole might be due to the smallest size of machine being used in larger numbers by such riders.

23. Figures of this kind have not previously been available, and they are directly relevant to the problem under consideration. At the same time, it is clear that they cannot be considered conclusive, since once again no account is taken of possible variations, which may be considerable, in the average mileage covered by riders of the different classes of machine, and in the different age groups. Further information as regards relative liability of motor cyclists at different ages to be involved in accidents, is given in Appendix A.

Effect of size of motor cycle on severity of injuries

24. The Road Research Laboratory have also provided figures, which are relevant to the indications in Table 8 above, of an increase in the casualty rate and the seriousness of casualties with the size and power of the machine. Table 9 below shows, for the year 1953, the number of casualties per motor cycle licensed according to the size of motor cycle.

TABLE 9

Casualty rates per licensed motor cycle in 1953

Size of machine	*Casualties to riders*		*Number of motor cycles licensed (September)*	*Total killed per 10,000 motor cycles*	*Total casualties per 10,000 motor cycles*
	Fatal	*Total*			
Motor assisted pedal cycles ..	43	2,452	153,919	2·8	159
Solo motor cycles :					
Not over 150 c.c.	104	4,794	224,856	4·6	213
Over 150 c.c., not over 250 c.c.	116	4,864	150,774	7·7	323
Over 250 c.c.	657	19,852	338,935	19·4	586

Note.—Pillion passengers are excluded.

25. These figures show a marked increase in the casualty rate with increasing size of motor cycles, that for the larger motor cycle being nearly three times that for the smaller as regards casualties, and four times for fatalities. On the other hand, these figures once again do not make any allowance for different mileages covered yearly by different sizes of machines. It is reasonable to suppose that the larger machines in general cover longer distances, and the figures to this extent should be regarded as likely to exaggerate the relative risks.

26. The proportion of riders killed and seriously injured of the total casualties is also greater for the large than for the small machine, as is shown by the following Table :—

TABLE 10

Severity of injury by size of vehicle in 1953

Severity of injury to rider	*Motor Cycle*			
	Up to 60 c.c.	*61–150 c.c.*	*151–250 c.c.*	*Over 250 c.c.*
Number of riders killed	43	104	116	657
Number of riders seriously injured	677	1,440	1,712	7,041
Number of riders slightly injured..	1,732	3,250	3,036	12,154
Total casualties	2,452	4,794	4,864	19,852
Killed as percentage of total ..	1·8	2·2	2·4	3·3
Seriously injured as percentage of total	27·6	30·0	35·2	35·5

Information furnished by the General Post Office

27. The General Post Office employ considerable numbers of youths riding motor cycles for delivering telegrams. They are normally recruited at the ages of 16 or 17, and the type of motor cycle used is generally of the 125 c.c. type, but with a few of 250 c.c. The General Post Office carried out a special investigation relating to riders who were involved in accidents in the year ending October, 1952. The information is based on the number of riders involved in accidents and the total number in employment on any particular date. This information enabled the following rates to be calculated. (All accidents involving personal injury or damage however slight have been included to arrive at the figures in these Tables and the figures include riders concerned in more than one accident.)

TABLE 11

G.P.O. motor cyclists

Age	*Yearly accident rate per rider*
16	·86
17	·69
18	·70
Over 18	·30

28. The figures in Table 12 below from the same source show how the accident rate, for Post Office motor cyclists varied with riding experience during the first years riding.

TABLE 12

G.P.O. motor cyclists

Experience	*Yearly accident rate per rider*
Under tuition	·45
During 1st month after passing test	1·03
2–3 months after passing test	1·33
4–6 months after passing test	·88
7–12 months after passing test	·71
Over 1 year after passing test	·49

29. We considered that the information provided by the General Post Office was of considerable interest. While, however, the figures indicate a somewhat higher accident rate among 16 year olds than among 17 and 18 year olds, the factor of experience, which must count against the 16 year old, seems likely, at any rate in this employment, also to be important.

Factor of experience

30. We attempted to assess also the extent to which experience in riding motor cycles might be relevant to the problem of the minimum age.

31. Reports about accidents involving personal injury over the whole country which are prepared by the police include an assessment of the causes. One of the items included in the list of causes is " inexperience with the vehicle in use at the time ". We found that the younger riders, particularly those in the 16 year old age group, are shown to have had more accidents attributable to this cause than did the older riders. This result might have been expected because at whatever age riders start they will be inexperienced, and therefore more likely to have proportionately more accidents attributable to this cause than riders who have been riding for some years. We concluded that riding experience may be particularly important to the problem before us, but were unable to find any reliable data which would enable the effects of experience and age to be examined separately.

32. It was not possible to assess the relative performance of motor cyclists of different age groups in the driving test, as applicants for the driving test have only to hold a current provisional driving licence and are not required to state their age.

Continental legislation

33. Most European countries have a lower age limit for riding mopeds than for other motor cycles, and do not require a driving test for riders of mopeds. The minimum age in other countries is shown in Appendix B.

CONCLUSIONS AND RECOMMENDATIONS

The minimum age—general

34. We reached the conclusion that the information available does not justify a recommendation to raise generally the age limit of 16 years for the granting of a licence to ride a motor cycle. In forming this view, we were influenced by the fact that there is at present no conclusive evidence to support a view that riders of the age of 16 or 17 are subject to a higher accident rate than riders of 18 or 19 or in their early twenties. The evidence reviewed in this report indicates that the accident rate per rider is highest between the ages of 18 and 25.

35. We also felt that in this matter any unduly restrictive attitude would be altogether wrong. The era in which we are living is becoming constantly more dependent on mechanical and scientific developments, and the use of road transport will play, in the life of individual citizens as well as for all other purposes, an increasingly important role. Young people, from the time they leave school, take an active part in the Nation's industrial life. At the age of 17 they are permitted to drive cars and goods vehicles, other than heavy goods vehicles, and so far as we are aware there is no intention to alter this. At an early age, in the Armed Forces, they are called upon to handle and sometimes control complicated machines such as tanks and aircraft. In our view these facts are relevant to our problem, and we can see no justification for an approach which does not take them into account.

36. At the same time, we fully recognise the seriousness of the problem of road accidents, and of motor cycle accidents in particular, and the loss to the Nation which is involved ; we also recognise the great vulnerability to injury of riders of motor cycles. In our view an attempt must, and can, be made to reduce the number of casualties to riders of motor cycles, but we feel that a proposal to raise the age limit generally could be justified only if conclusive evidence were forthcoming that the most youthful riders are specially liable to accidents. Moreover, we would point out that while the raising of the minimum age to 17 would, for practical purposes, eliminate accidents to 16 year old riders of motor cycles, there would almost certainly be increases in the present numbers of accidents to pedal cyclists at that age, and to 17 year old riders of motor cycles who would have less experience.

37. The most unsatisfactory, and in our view the most dangerous, feature in the present situation is that it is possible for any 16 year old, without any previous motor cycle experience or training, to start riding the largest type of machine. Expert opinion among motor cyclists favours a progressive approach to the larger machine by way of the lightweight, and we consider that an attempt should be made, by introducing different age limits for different classes of machine, to influence the younger rider to progress by stages. Thus, in our view, the best approach to the problem of the minimum age lies in replacing the present sharply cut division between those who may, and may not, ride motor cycles, by a progression of steps permitting a rider to ride different types of machine, at successive ages.

38. We, recognise however that the evidence we have been able to obtain about the relative accident rates for motor cyclists of different ages is not conclusive, and, as suggested in paragraph 18 above, we recommend that an attempt should be made to obtain further data by undertaking special surveys of age distribution and riding experience.

Proposals for progressive minimum ages

39. Although strongly advocating that all motor cyclists should have experience in riding lightweight machines before riding the larger machines, we can see no practicable means whereby such a progression could be enforced among riders of all ages. In our view, however, the device of adopting progressive minimum age limits is justifiable on the evidence we have reviewed, and might make a valuable contribution to the reduction of motor cycling accidents as a whole.

40. The first step should be the moped. We would point to the relatively favourable accident record of mopeds, and are convinced that, in just the same way as the riding of a pedal cycle by a child who has passed a cycling proficiency test gives training in road sense, which provides a foundation for the future motor cyclist or motor car driver, so the riding of a moped could provide a further stage in experience, helping to bridge the gap between the pedal cycle and the orthodox motor cycle. Taking into account the design and limited speed capability of the present-day moped and its close affinity to the pedal cycle, we can see no reason why mopeds should not be ridden at the age of 15, and we believe that to give young people the opportunity of riding a moped for a period starting at the age of 15, would not, in the long run, prove prejudicial to road safety : the result, in our view, will be the reverse. We, therefore, recommend that the minimum age for riding a moped should be set at 15 years : we appreciate that this will require new legislation. Two of our members, Councillor J. Scott, representing the Association of County Councils in Scotland, Convention of Royal Burghs and Counties of Cities Association and Mr. T. C. Foley, representing the Pedestrians' Association for Road Safety, dissent from this recommendation to the extent that they do not consider that the minimum age for riding a moped should be reduced below 16 years.

41. If this proposal is adopted we feel it will be essential to safeguard the position, as has already been done in some continental countries, by making arrangements to secure stabilisation of the existing characteristics of mopeds and, in particular, adherence by manufacturers to a specification which will define appropriate constructional features and limit the maximum speed to about 25 m.p.h. This also would appear to involve new legislation.

42. A further stage in progression which would be advantageous to road safety would, in our view, be achieved by dividing other types of motor bicycles into two categories and fixing a higher age limit for the larger machines. We attach considerable importance to the evidence already reviewed of the greater seriousness of accidents occurring with the larger machines, which present great attractions to young riders, who often prefer to buy a larger machine second-hand, rather than a new lightweight at a similar price.

43. Although the performance of machines would be the best criterion in regard to progression we concluded that an appropriate dividing line can be made only on the basis of engine cylinder capacity, and we propose that the field of progression should be extended by raising the minimum age for riding a motor bicycle (with or without sidecar) of more than 250 c.c. to 17 years. We believe, that by this means many young riders who at present begin riding on larger machines, would be induced to start on lightweight machines, and so at any rate acquire useful experience before acquiring a larger machine.

44. In making this proposal, we wish to emphasise the following points :—

(1) Seventeen is suggested as the minimum age for riding larger motor cycles rather than, for example, 18 because 17 is the age at which it is possible to obtain a licence to drive a motor car or goods vehicle (other than a heavy goods vehicle), and taking all considerations into account, one year is considered a reasonable interval.

(2) A dividing line at 250 c.c. is admittedly arbitrary, but, taking into account existing designs and likely future developments, is considered the most appropriate for the purpose.

The grouping of motor cycles for driving test purposes

45. Our proposals about the grouping of motor cycles for driving test purposes, have been reached in the light of our conclusions about the problem of the minimum age, and are related to them.

(*a*) *Mopeds*

46. We consider that while the passing of the driving test on an orthodox motor cycle or scooter should enable the candidate to ride a moped, the reverse is not applicable, and that a candidate who passes the test on a moped should be required to take a further test to qualify for other types of motor cycles. Experience with a moped, while valuable training towards learning to ride the orthodox type of motor cycle, is not sufficient in our view to dispense with the need for a test before a full licence is granted to ride such a machine.

47. There was considerable discussion in the Committee about the need for a driving test for a moped. On the continent, the general practice is not to require a test, and we have noted that it has been proposed from time to time that Great Britain should follow those continental countries which treat mopeds in most respects as being pedal cycles, rather than motor vehicles. We feel, however, that except in so far as concerns the question of requiring a driving test, this issue is outside the scope of this report. Some members put forward the view that riders of mopeds need not be required to take a driving test, and

that continued insistence on a test was not only unnecessary, but also would discourage young people from beginning their motor cycling careers on mopeds and so affect adversely the contribution likely to be made to road safety by adopting our proposals for progressive minimum ages. Other members suggested that the driving test for mopeds could be limited to a theoretical test based mainly on the Highway Code. Alternatively, it was suggested that the holder of a substantive driving licence to drive a motor car should be permitted to ride a moped without a further test. The Ministry's Chief Driving Examiner, however, although agreeing that experienced pedal cyclists usually have little difficulty in passing the test on a moped, and that those of them who fail usually do so because of lack of knowledge and application of the Highway Code, has informed us that considerable numbers of candidates on mopeds nevertheless fail for various reasons to pass the test, and he considered it essential to retain the test as at present. The Committee finally accepted this view. Mr. Hanhart, representing the Standing Joint Committee of the R.A.C., A.A. and R.S.A.C. wished it to be recorded that, in his view, once a person has passed the test for a moped, he should not be required to take a further test before riding motor scooters and light motor-cycles with an engine capacity not exceeding 200 c.c.

(*b*) *Other motor cycles*

48. We gave considerable thought to suggestions that separate driving tests should be required for different categories of motor cycles. As has already been explained, the dividing line in the smaller categories between scooters and the more orthodox types of machine is already tending to become " blurred ". There are some differences in the methods of control, but we feel that it is neither necessary, nor practicable, to attempt to draw a distinction for driving test purposes between these types of machine.

49. There remains the question of the desirability of requiring a further test for the larger machines, for example over 250 c.c. or 350 c.c. We have concluded that since there is no essential difference in the methods of control or riding technique employed, no useful purpose would be served by requiring a further test.

(*c*) *Three-wheelers*

50. After reviewing existing types of three-wheelers we agreed that persons passing the driving test on a motor cycle should not be granted a licence to drive a three-wheeler and conversely that a person passing the test on any type of three-wheeler as defined in paragraph 7 of this report, should not be granted a full licence covering motor cycles or mopeds. We recommend that The Motor Vehicles (Driving Licences) Regulations should be amended accordingly. Our further recommendations with regard to three-wheelers will be found in the concluding section of this report.

Other recommendations

51. In concluding our recommendations about motor cycles proper, we wish to draw attention to two further points which we consider to be relevant.

(*a*) *Purchase of machines*

52. We were informed that it is not uncommon for novice motor cyclists to be involved in accidents within a few hours of purchasing their machines, and that in some cases it has come to light that a young person without any experience whatever, having purchased a motor cycle, has ridden directly away from the dealer's showrooms in a busy street and has almost immediately been involved in an accident.

53. It seems difficult to legislate against this practice, but the folly of it is obvious. We recommend that the Ministry should consult the organisations representing manufacturers and dealers, to see what steps can be taken to ensure that dealers warn purchasers who are inexperienced against riding in unsuitable conditions at the outset, and make suitable arrangements for delivery. In fairness it should be added that many responsible dealers go to considerable pains to advise and instruct purchasers.

(*b*) *Motor cycle training.*

54. We felt strongly that adequate motor cycle training would be the most valuable factor of all in reducing the accident rate for motor cyclists, and we are considering this separately. We recognise the value of the R.A.C./A.C.U. Training Scheme, but only very limited numbers of novice motor cyclists can be catered for by this scheme at present.

Three-wheeled motor cycles Survey

55. There are many types of three-wheeled machines, with an unladen weight below 8 cwts., which fall within the definition of "motor cycle" in the Road Traffic Acts and are thus within our terms of reference. As is pointed out in paragraph 6 of this report, the definition excludes "Invalid carriages", but small "three-wheelers" of many different types are coming into use in increasing numbers in this country. The numbers currently licensed in each year are shown in Table 1 in this Report; the total in 1956 was 26,261.

56. In our view, these three-wheelers constitute a quite different problem from that which we have been considering. They are more stable than motor cycles, and they do not seem at present to be driven often by young people of 16 and 17. In the Ministry's returns relating to road casualties, three-wheelers are not distinguished as a separate category, but are grouped with motor cars.

Conclusions and recommendations

57. We have no evidence which suggests the need for raising the minimum age for three-wheelers classified as motor cycles from the present limit of 16. There is a good deal to be said for the view that most types of three-wheelers are much more akin to motor cars than to motor bicycles, but this does not in itself seem to provide justification for raising the minimum age limit to 17 to correspond with that for motor cars. We feel that no action is called for at present, but suggest that as the number of these machines increases it will probably be desirable to distinguish them in the returns relating to road casualties.

58. So far as the driving test is concerned, we consider that it is quite inappropriate that a person passing a test on a three-wheeler not fitted with means of reversing should, as at present, be granted a licence enabling him to ride a motor bicycle (or a moped), and, as stated in paragraph 50 above, we recommend that the Regulations should be amended on this point.

59. Three-wheelers under 8 cwts. fitted with means of reversing are already grouped with motor cars for purposes of the driving test. A person under 17 years of age who passes the driving test on one of these vehicles does not have to take a further test on a motor car, although he may not actually drive a motor car until he reaches the age of 17. We consider that there is justification for maintaining a division for driving test purposes between three-wheelers not fitted with means of reversing, and those which are so fitted, since a candidate who is to be permitted to drive a vehicle with means of reversing should be

tested in carrying out reversing manoeuvres. However, a candidate who has passed the test on a motor car or a three-wheeler fitted with means of reversing should clearly be treated as qualified to drive a three-wheeler not fitted with means of reversing.

60. We do not, therefore, see any reason to change the present arrangement whereby reversible three-wheelers at present classed as motor cycles are grouped for driving test purposes with motor cars, but consider that a person passing the the test on a three-wheeler not fitted with means of reversing should have his full licence restricted to vehicles of that type.

61. In conclusion, we wish to place on record our appreciation of the services of Miss J. Waller of the Ministry of Transport and Civil Aviation who served as the Secretary of our Sub-Committee and has given invaluable help in the preparation of this report.

Signed on behalf of the Committee,
G. R. H. NUGENT,
Chairman

July, 1957

APPENDIX A

Additional Information Regarding the Relative Liability of Motor Cyclists at Different Ages to be Involved in Accidents

1. Additional information, provided by the insurance company, shows the relative liability of motor cyclists of different age groups and on machines of different sizes, to be involved in accidents, expressed in terms of claims cost. The sample on which the following Tables are based includes Third Party and Comprehensive insurances. This gives rather similar results to those already described in paragraph 22. The sample was once again in respect of 100,000 insured motor cycles, but related to the year 1953.

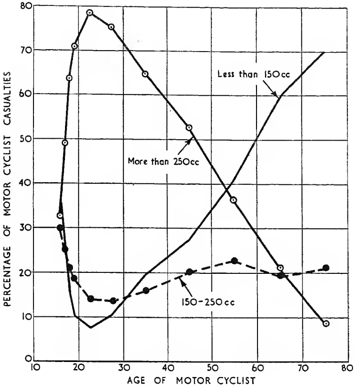
Various age groups' comparative liability to claims
(Third Party and Comprehensive policies)

Ages	*Per cent. of number in sample*	*Per cent. of claim cost*	*Comparative cost of claims*
16–17	5·0	8·4	1·68
18–19	5·9	10·5	1·78
20–21	10·1	18·3	1·81
22–23	10·9	17·8	1·63
24–25	8·9	9·7	1·09
26–30	15·5	14·1	·91
31–40	18·7	11·0	·59
41–50	13·6	7·4	·54
Over 50 and unclassified ..	11·4	2·8	·25
All ages	100·0%	100·0%	Average Claim = 1

Comparative financial liability to claims of various size groups of machines

Group	*Per cent. of number in sample*	*Per cent. of claim cost*	*Comparative cost of claims*
Up to 100 c.c. ..	14·0	2·0	·14
101–125 c.c. ..	22·2	15·9	·72
126–200 c.c. ..	8·9	8·4	·94
201–350 c.c. ..	28·8	30·5	1·06
Over 350 c.c. ..	26·1	43·2	1·45
All Groups ..	100·0%	100·0%	Average Claim = 1

2. In Figure 1, the casualties for three sizes of motor cycle are shown as percentages of the total casualties for solo motor cyclists in each age group. The high proportion of casualties on the larger machines in the younger age groups (up to the middle twenties) probably reflects the popularity of these machines for these age groups.



APPENDIX B

Continental Legislation

Country	*Minimum age for driving motor cycles*	*Whether driving test required*	*Minimum age for driving mopeds*	*Whether driving test required*
Austria	18	No	16 (including all machines up to 125 c.c.)	No
Belgium ..	18	No	16	No
Denmark ..	18	No	16	No
France	18	Yes for machines over 125 c.c.	16 (including all machines up to 125 c.c.)	No
German Federal Republic.	18	Yes	16	No
Italy	14	No	14	No
Netherlands ..	18	Yes	16	Introduction under consideration
Norway.. ..	—	No	16	No
Sweden	16 for motor cycles up to 75 Kg.	No	15	No
Switzerland ..	16	Yes	16	Theoretical test
Great Britain ..	16	Yes	16	Yes
Northern Ireland	16	Yes	16	Yes

(71219) Wt. 2904/V73 K.32 11/57 Hw.